FlyBy Math™ Alignment to
Nevada Mathematics Content Standards
February 25, 2003 Edition

Content Standard 1.0: Numbers, Number Sense, and Computation
To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will accurately calculate, use estimation techniques, number relationships, operation rules, and algorithms; they will determine the reasonableness of answers and the accuracy of solutions.

Application

Content Standard	*FlyBy Math*™ Activities
1.8.2 Compute with **rational** and **irrational numbers** to solve a variety of problems including rates, recipes, unit costs, and percents (e.g., discounts, interest, sale, prices, commissions, taxes).	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Estimation and Rounding

Content Standard	*FlyBy Math*™ Activities
1.8.7 Estimate in problem-solving situations and in practical applications; determine the reasonableness of the answer and verify the results.	--Predict outcomes and explain results of mathematical models and experiments.

Content Standard 2.0: Patterns, Functions, and Algebra
To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs) of patterns, functions, and algebraic relations as modeled in practical situations.

Relationships

Content Standard	*FlyBy Math*™ Activities
2.8.2 Translate among verbal descriptions, graphic, tabular, and algebraic representations of mathematical situations.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

Variables (Unknowns)

Content Standard	*FlyBy Math*™ Activities
2.8.3 Identify, model, describe, and evaluate relationships, including functions, using a variety of methods with and without technology.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

Algebraic Basics	
Content Standard	***FlyBy Math™* Activities**
2.8.5 Describe how a change in one variable of a mathematical relationship affects the remaining variables using various tools and methods.	--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates. --Interpret the slope of a line in the context of a distance-rate-time problem.

Content Standard 3.0: Measurement

To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements.

Estimation and Formulas	
Content Standard	***FlyBy Math™* Activities**
3.8.3 Select and apply appropriate formulas to solve problems; identify the relationship between changes in area and volume and changes in linear measures of figures.	--Use the distance-rate-time formula to predict and analyze aircraft conflicts.

Proportion and Ratio	
Content Standard	***FlyBy Math™* Activities**
3.8.5 Apply ratios and proportions to calculate rates and as a method of indirect measure (e.g., miles per hour, cost per unit).	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Content Standard 4.0: Spatial Relationships and Geometry

To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will identify, represent, explain, verify, and apply spatial relationships and geometric properties.

Line, Slopes, and Linear Equations	
Content Standard	***FlyBy Math™* Activities**
4.8.5 Use coordinate geometry to represent and interpret relationships defined by equations and formulas (including distance, midpoint, and slope), with and without technology.	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system. --Interpret the slope of a line in the context of a distance-rate-time problem.

Content Standard 5.0: Data Analysis

To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections.

Data Collection and Organization

Content Standard	***FlyBy Math™* Activities**
5.8.1 Organize, display, read, and analyze data, with and without technology, using a variety of displays including box and whisker plots.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes. --Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs.

Design

Content Standard	***FlyBy Math™* Activities**
5.8.6 Formulate reasonable inferences and projections based on interpolations and extrapolations of data to solve problems.	--Apply mathematics to predict and analyze aircraft conflicts and validate through experimentation.